A270 SBC

Mini-ITX SBC w/ Socket AM2 AMD Athlon 64 X2 / Athlon 64 35W and 65W CPU, VGA, DVI, LCD, Ethernet and Mini-PCI Interface.

USER MANUAL Version 1.1

FCC Statement

This device complies with part 15 FCC rules. Operation is subject to the following two conditions：

- This device may not cause harmful interference.
- This device must accept any interference received including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a class "a" digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at him own expense.

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Winmate warrants that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, Winmate will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in it's original packaging to obtain warranty service.

If the serial number and the product shipping data differ by over 30 days, the in-warranty service will be made according to the shipping date. In the serial numbers the third and fourth two digits give the year of manufacture, and the fifth digit means the month (e. g., with A for October, B for November and C for December).

For example, the serial number 1W07Axxxxxxxx means October of year 2007.

Packing List

Before using this Motherboard, please make sure that all the items listed below are present in your package：

- 1 x A270 Motherboard
- 1 x A270 SBC User Manual
- 1 x A270 SBC User's Manual & Driver CD
- 1 x A270 CPU Sink
- 1 x A270 CPU Holder
- 1 x 44pin HDD IDE Cable
- 1 x HDD SATA Cable
- 1 x RS-232 Cable
- 1 x USB Cable

If any of these items are missing or damaged, contact your distributor or sales representative immediately.

Customer Service

We provide service guide for any problem as follow steps：First, visit the website at http://www.winmate.com to find the update information about the product. Second, contact with your distributor, sales representative, or our customer service center for technical support if you need additional assistance. You may have the following information ready before you call：

- Product serial number
- Peripheral attachments
- Software (OS, version, application software, etc.)
- Description of complete problem
- The exact wording of any error messages

In addition, free technical support is available from our engineers every business day. We are always ready to give advice on application requirements or specific information on the installation and operation of any of our products. Please do not hesitate to call or e-mail us.

Warranty

Winmate warrants that each of its products will be free from material and workmanship defects for a period of one year from the invoice date. If the customer discovers a defect, Winmate will, at its option, repair or replace the defective product at no charge to the customer, provided it is returned during the warranty period of one year, with transportation charges prepaid. The returned product must be properly packaged in it's original packaging to obtain warranty service.

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For example, the serial number 1W07Axxxxxxxx means October of year 2007.

Safety Precautions

- **Warning!**

Always completely disconnect the power cord from your chassis whenever you work with the hardware. Do not make connections while the power is on. Sensitive electronic components can be damaged by sudden power surges. Only experienced electronics personnel should open the PC chassis.

- **Caution!**

Always ground yourself to remove any static charge before touching the CPU card. Modern electronic devices are very sensitive to static electric charges. As a safety precaution, use a grounding wrist strap at all times. Place all electronic components in a static-dissipative surface or static-shielded bag when they are not in the chassis.

Safety and Warranty

1. Please read these safety instructions carefully.
2. Please keep this user's manual for later reference.
3. Please disconnect this equipment from any AC outlet before cleaning. Do not use liquid or spray detergents for cleaning. Use a damp cloth.
4. For pluggable equipment, the power outlet must be installed near the equipment and must be easily accessible.
5. Keep this equipment away from humidity.
6. Put this equipment on a reliable surface during installation. Dropping it or letting it fall could cause damage.
7. The openings on the enclosure are for air convection. Protect the equipment from overheating. DO NOT COVER THE OPENINGS.
8. Make sure the voltage of the power source is correct before connecting the equipment to the power outlet.
9. Position the power cord so that people cannot step on it. Do not place anything over the power cord.
10. All cautions and warnings on the equipment should be noted.
11. If the equipment is not used for a long time, disconnect it from the power source to avoid damage by transient over-voltage.
12. Never pour any liquid into an opening. This could cause fire or electrical shock.
13. Never open the equipment. For safety reasons, only qualified service personnel should open the equipment.
14. If any of the following situations arises, get the equipment checked by service personnel:
    A. The power cord or plug is damaged.
    B. Liquid has penetrated into the equipment.
    C. The equipment has been exposed to moisture.
    D. The equipment does not work well, or you cannot get it to work according to the user’s manual.
    E. The equipment has been dropped and damaged.
    F. The equipment has obvious signs of breakage.
15. Do not leave this equipment in an uncontrolled environment where the storage temperature is below -20° C (-4°F) or above 60° C (140° F). It may damage the equipment.

Revision History

Version	Date	Note	Author
0.1	2007.05.16	✓ First Version	Tin Lai
0.2	2007.06.11	✓ Increase Driver installation	Tin Lai
0.3	2007.06.25	✓ Revise BIOS Item ✓ Update SW1 Pin definition for Panel solution Selector	Tin Lai
1.0	2007.07.15	✓ Revise BIOS Item ✓ Increase Chapter 2.5.7 Multiple Display Function ✓ Increase Chapter 7 Cool n' Quiet Driver Installation	Tin Lai
1.1	2007.10.15	✓ Change Com1 and Com2	Aladin
	2007.10.30	✓ Add 1920x1080, 1920x1200	Aladin

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CHAPTER 1

General Information

This chapter includes A270 Motherboard background information.

Sections include:

- Introduction
- Feature
- Motherboard Specification
- Function Block
- Board Dimensions

Chapter 1 General Information

1.1 Introduction

A270 Mini ITX board incorporates the AMD M690G Chipset for Embedded Computing, consisting of the two core components: AMD M690G and SB600 Chipset, an optimized integrated graphics solution with a 1000MHz HyperTransport Technology. Dimensions of the board are 170mm x 170mm.

AMD M690G Chipset integrated powerful 3D graphics engine, based on ATI Radeon X700-based Graphics architecture. It features a low-power design, is validated with the AMD® Athlon™ 64 and AMD® Athlon™ 64 X2 35W and 65W processors on 90nm process. With dual channel DDR2 533/667/800 MHz two DIMM socket on board, up to 4GB of DDR2 system memory.

AMD SB600 Chipset provides leading performance and the most universal connectivity options today. Eliminating the need for a USB hub, the SB600 provides up to 10 USB 2.0 ports. Connect with all types of peripherals with full compliancy to PCI and LPC bus support for all legacy devices. Complete the multimedia experience with high-definition audio and support for HD DVD and Blu-Ray HD audio.

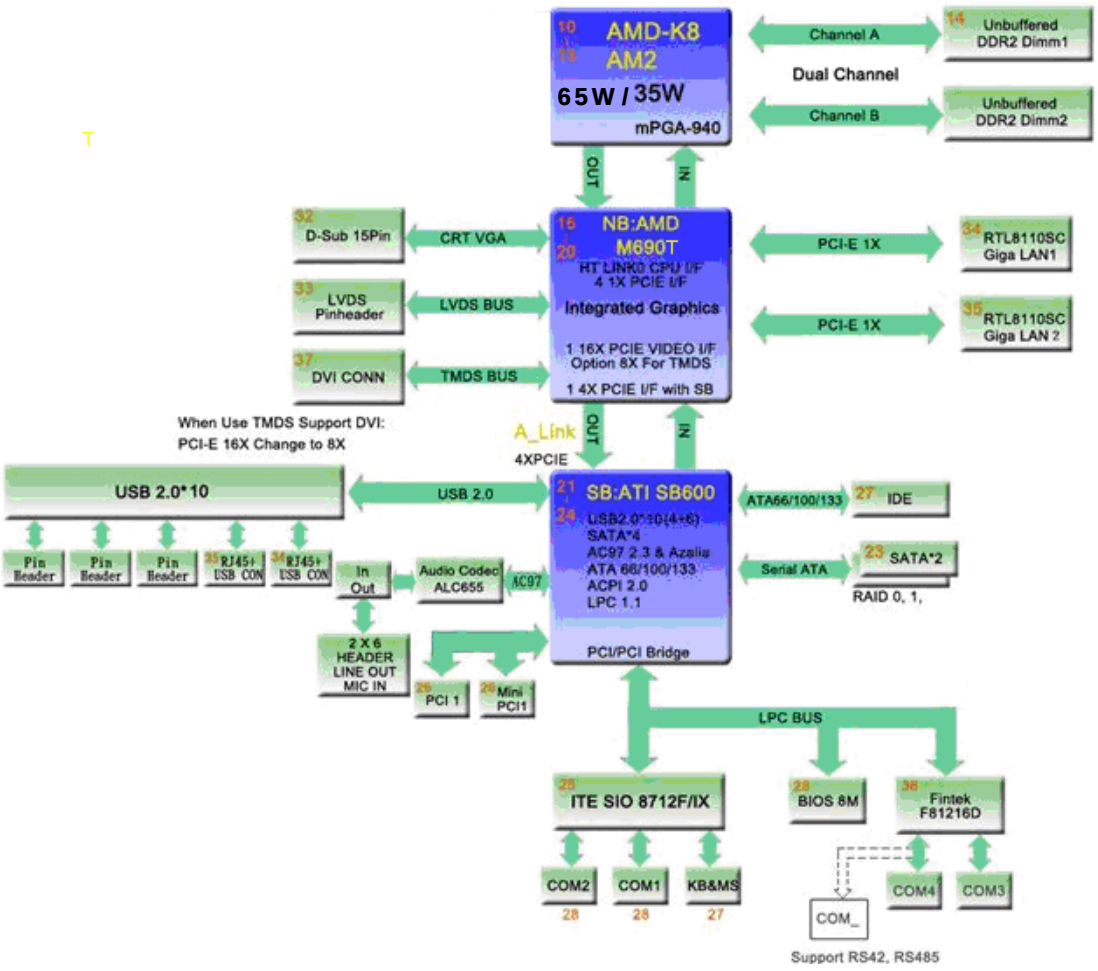
1.2 Feature

- Designed for Mini-ITX Motherboard
- Socket AM2 supports AMD Athlon™ 64 / Athlon™ 64 X2 35W processor, up to 1.8GHz
- Socket AM2 supports AMD Athlon™ 64 / Athlon™ 64 X2 65W processor, up to 2.6GHz
- System memory up to 4GB DDR2 533/667/800 SDRAM
- Integrated AMD M690G + SB600 Chipset
- Integrated VGA / LVDS / DVI, ATI Graphic Integrate X700-based
- Dual Gigabit LAN
- High Performance and Anti-Vibration to ensure maximum reliability
- 2 x SATAI/II, 10 x USB 2.0, 4 x COM, 2 x RJ-45,
- 1 x Mini PCI, 1 x PCI, 1 x VGA, 1 x DVI

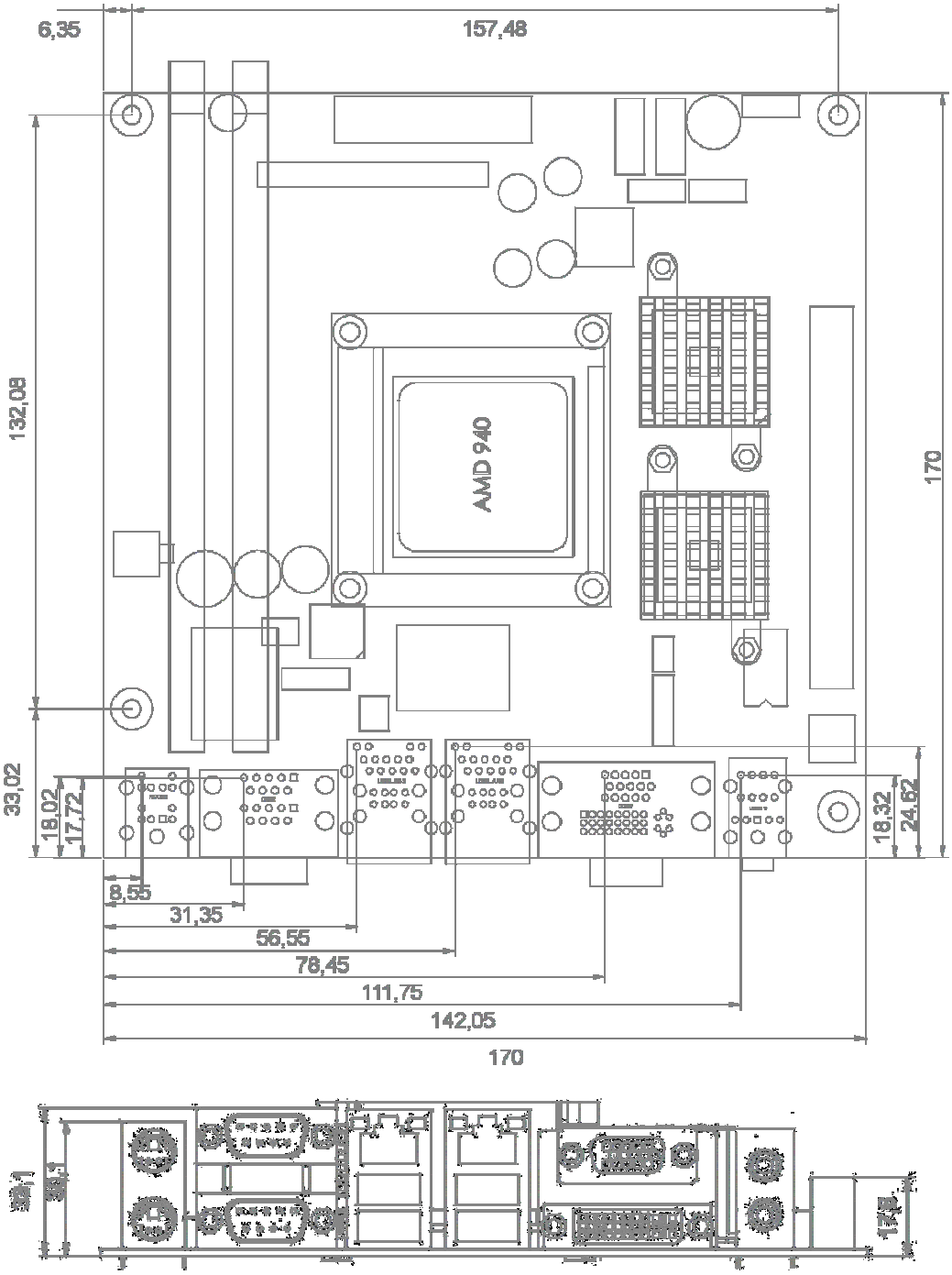
1.3 Motherboard Specifications

CPU Type	AMD®Athlon™ 64 X2 / Athlon™ 64 35W or 65W processors, up to 2.6GHz
CPU HT	HyperTransport™ interface speed is depended on AMD processors, up to 2000MHz
CPU Socket	Socket AM2
Chipset	AMD M690G / SB600 chipset
BIOS	Phoenix 8Mbit BIOS
Cache	1MB
VGA	AMD M690G built-in ATI Radeon X700-based Graphics 256MB shared with system
LVDS	AMD M690G built-in, single- or dual-channel panel support up to WUXGA panel resolution. Max. to 1920x1200, 24bit
DVI	DVI out
LAN	2 x Gigabit Ethernet (Dual Realtek RTL8111B Gigabit LAN COntroller, Optional Dual Realtek RTL8101E 10/100Base -T LAN Controller)
Memory Type	2 x DDR2 DIMM socket, supports up to 4GB DDR 533/667/800 SDRAM
LPC I/O	ITE 8712
Keyboard/Mouse	2 x PS/2 Keyboard/Mouse connectors
IDE Interface	One channels; supports Ultra DMA 33/66/100
Sound	Realtek ALC655 5.1 channel (Line-out, Line-in & Mic in)
USB	10 ports, USB 2.0 (4 x USB Conn., 6 x USB pin-header)
Edge Connectors	2 x PS/2 connector for keyboard/mouse 1 x Gigabit LAN RJ-45 + 1 x dual USB stack connector 1 x Gigabit LAN RJ-45 + 1 x dual USB stack connector 2 x DB9 for COM 1 & COM 2 1 x VGA out connector + 1 x DVI out connector 1 x Audio Jack for Audio (Line-Out, Line-In)
On Board Pin-Header Connectors	1 x 44 pins box-header 2 x SATA connector for SATAI/II ports, 2 x 10pins pin-header for COM 3 & COM 4 (RS232) 2 x 3pins pin-header for COM4 selection (RS232/422/485) 1 x 5pins pin-header for RS-422/485 insert 2 x 5pins pin-header for USB 5/6, 7/8, 9/10 x 3 2 x 6pins pin-header for Front Audio 1 x 40pins DF13 Connector for LVDS 1 x 20pins ATX connector. 2 x 5pins pin-header for Front Panel 1 x 3pins pin-header for CPU Fan 1 x 3pins pin-header for System Fan 1 x 3pins pin-header for NB Fan 1 x 2pins pin-header for 5V, 12V Voltage input
Power Connector	Input: 20-pin ATX Power input
Expansion Slots	1 x PCI, 1 x Mini-PCI
Form Factor	Mini-ITX
Dimensions	170mm x 170mm

➢ Function Block



1.4 Board dimensions



CHAPTER 2

Installations

This chapter provides information on how to use the jumps and connectors on A270 Motherboard.
The Sections include:

- Memory Module Installation
- I / O Equipment Installation
- Setting the Jumpers
- Connectors on A270 Motherboard

Chapter 2 Installations

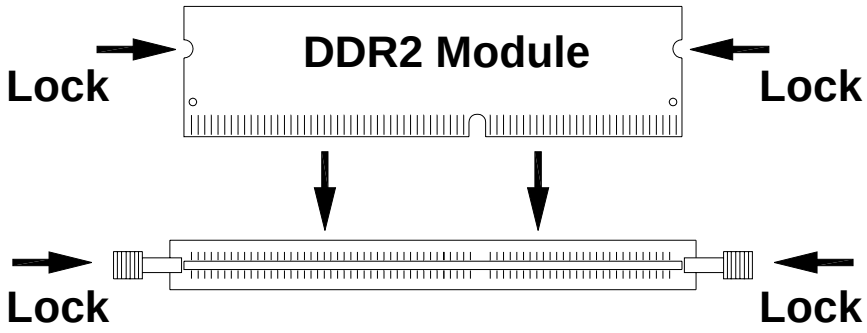
2.1 Memory Module（DIMM）Installation

A270 motherboard supports two DDR2 memory socket for a maximum total memory of 4GB in DDR2 memory type.

Installing and Removing Memory Modules

To install the DDR2 modules, locate the memory slot on the board and perform the following steps:

1. Hold the DDR2 module so that the key of the DDR module align with those on the memory slot.
2. Gently push the DDR2 module in an upright position until the clips of the slot close to hold the DDR2 module in place when the DDR module touches the bottom of the slot.
3. To remove the DDR2 module, press the clips with both hands.



2.2 I/O Equipment Installation

2.5.1 Audio function

The Audio 5.1 channel capabilities are provided by a Realtek ALC655 chipset supporting digital audio outputs. The audio interface includes two jacks: line-in and line-out.

2.5.2 Serial COM ports

Two RS-232 connectors build in the rear I/O. One optional COM ports support RS-232. When an optional touch-screen is ordered with PPC, serial com port can connect to a serial or an optional touch-screen. One optional COM port supports RS232/422/485 choice through jumper setting.

2.5.3 Ethernet interface

The Motherboard is equipped with Dual Realtek RTL8111B (Optional Dual Realtek RTL8101E) chipset which is fully compliant with the PCI 10/100/1000 Mbps Ethernet protocol compatible. It is supported by major network operating systems. The Ethernet ports provide the standard RJ-45 jack.

2.5.4 USB ports

Ten USB device may be connected to the system though an adapter cable. Various adapters may come with USB ports. USB usually connect the external system to the system. The USB ports support hot plug-in connection. Whatever, you should install the device driver before you use the device.

2.5.5 External VGA

The Motherboard has one VGA port that can be connected to an external CRT/ LCD monitor. Use VGA cable to connect to an external CRT / LCD monitor, and connect the power cable to the outlet. The VGA connector is a standard 15-pin D-SUB connector.

2.5.6 External DVI

The Motherboard has one DVI port that can be connected to an external DVI/ LCD monitor. Use DVI cable to connect to an external DVI / LCD monitor, and connect the power cable to the outlet. The DVI connector is a standard DVI-D connector.

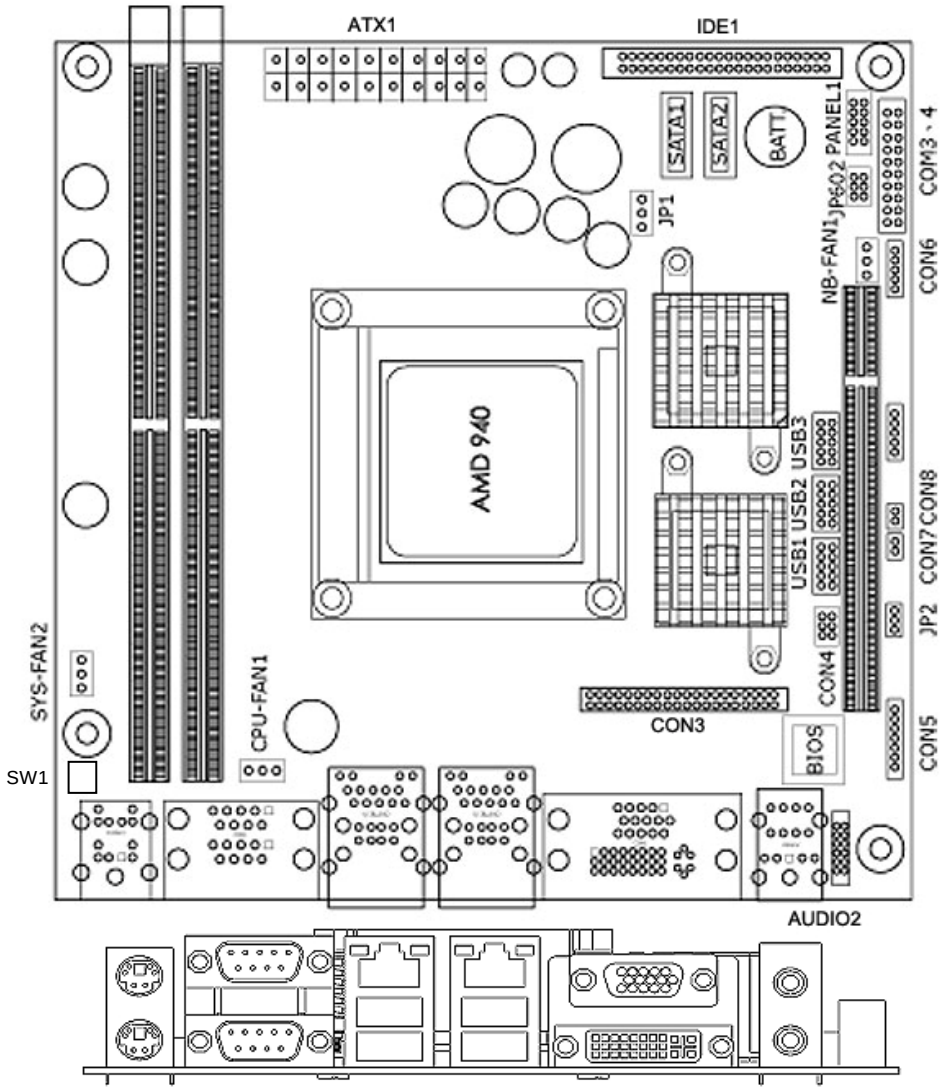
2.5.7 Multiple Display Function

A270 SBC integrated AMD M690G chipset, and provided VGA / LVDS / DVI outputs. The Mutli-display application is available for A270 SBC. Customers can

select two display devices of the VGA / DVI / LVDS output interface display. Then these displays can be set as desktop or extended desktop display via ATI Graphic utility. Possible configurations include:

- ✓ LCD and CRT
- ✓ LCD and DVI
- ✓ CRT and DVI

2.3 Jumpers and Connectors



Locating Jumpers and Connectors (front side)

2.4 Jumper Setting

A270 has a number of jumpers that allow you to configure your system to suit your application. The table below lists the functions of the various jumpers.

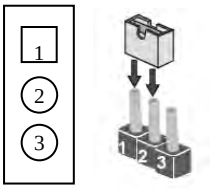
The following tables list the function of each of the board's jumpers.

Label	Function	Note
JP1	Clear CMOS	3x1 header, pitch 2.0mm
JP2	Brightness control VR	3x1 header, pitch 2.0mm
JP602	RS232/422/485 Selector	3x4 header ,pitch 2.0mm
SW1	Panel Solution Selector	6 x 2 Jumper

2.4.1 JP1: Clear CMOS

User must make sure the power supply to turn off the power supply before setting Clear CMOS. Users remember to setting jumper back to Normal before turning on the power supply.

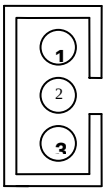
* : default



Description	Function	Pin#
Power on Mode	Clear CMOS	1 Short 2
	Normal *	2 Short 3

2.4.2 JP2: Brightness control VR

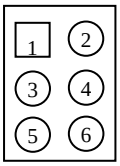
JP2 is Brightness control VR



Description	Pin#	Function
Brightness control VR	1	VCC (5V)
	2	Control Pin
	3	Gnd

2.4.3 JP602: RS232/422/485 Selector

The jumper can be configured to operate in RS-232/422/485 mode.

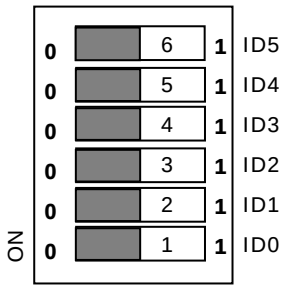


* : default

Description	Function	Pin#
RS232/422/485 Selection	RS232*	1 Short 2
	RS422	3 Short 4
	RS485	5 Short 6

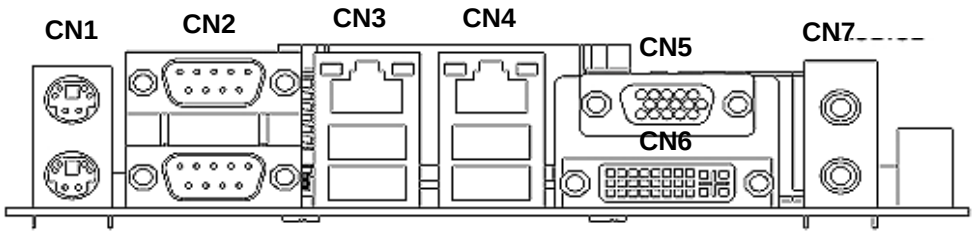
2.4.4 SW1: Panel Resolution Selector

The Switch can be configured to select Panel Resolution mode.

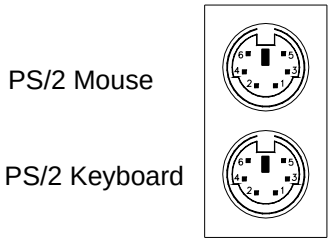


Panel Resolution For A270 SBC	ID0	ID1	ID2	ID3	ID4	ID5
Default	0	0	0	0	NC	NC
1024 x 768	1	0	0	0	NC	NC
1280 x 1024	0	1	0	0	NC	NC
1600 x 1200	1	1	0	0	NC	NC
1680 x 1050	0	0	1	0	NC	NC
640 x 480	1	0	1	0	NC	NC
800 x 600	0	1	1	0	NC	NC
1366 x 768	1	1	1	0	NC	NC
1920 x 1080	0	0	0	1	NC	NC
1920 x 1200	1	0	0	1	NC	NC

2.5 Rear I/O Connectors on A270 Motherboard



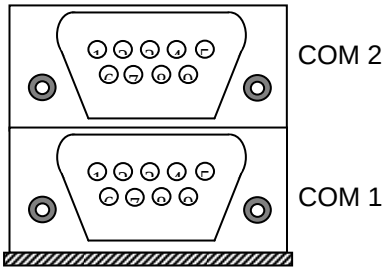
2.5.1 CN1：PS/2 Keyboard and PS/2 Mouse Connectors



Signal Name	Keyboard	Mouse	Signal Name
Keyboard data	1	1	Mouse data
N.C.	2	2	N.C.
GND	3	3	GND
5V	4	4	5V
Keyboard clock	5	5	Mouse clock
N.C.	6	6	N.C.

2.5.2 CN2：COM1 and COM2 serial Ports

CN2 is a stacked connector with COM2 on top and COM1 at the bottom.



Pin No.	SYMBOL
1	DCD
2	RxD
3	TxD
4	DTR
5	Ground
6	DSR
7	RTX
8	CTS
9	RI

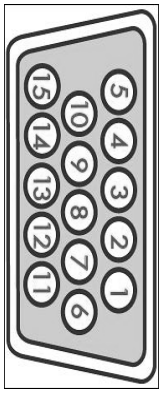
2.5.3 CN3： RJ45 and 2 USB Ports

CN3 is a stacked connector with RJ45 on top and 2 USB Port at the bottom.

2.5.4 CN4： RJ45 and 2 USB Ports

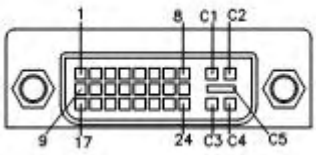
CN4 is a stacked connector with RJ45 on top and 2 USB Port at the bottom

2.5.5 CN5： VGA Connector



Pin No.	SYMBOL
1	RED
2	GREEN
3	BLUE
4	NA
5	GND
6	GND
7	GND
8	GND
9	LVGA5V
10	GND
11	NA
12	DAC_SDAT
13	HSYNC#
14	VSYNC#
15	DAC_SCL

2.5.6 CN6： DVI Connector



Pin #	Signal Name	Pin #	Signal Name	Pin #	Signal Name
1	TMDS Data2-	9	TMDS Data1-	17	TMDS Data0-
2	TMDS Data2+	10	TMDS Data1+	18	TMDSData0+
3	TMDS Data2/4 Shield	11	TMDS Data1/3 Shield	19	TMDS Data0/5 Shield
4	TMDS Data4-	12	TMDS Data3-	20	TMDS Data5-
5	TMDS Data4+	13	TMDS Data3+	21	TMDS Data5+
6	DDC Clock [SCL]	14	+5 V Power	22	TMDS Clock Shield
7	DDC Data [SDA]	15	Ground (for +5 V)	23	TMDS Clock +
8	Analog vertical sync	16	Hot Plug Detect	24	TMDS Clock -
C1	N/A	C3	N/A	C2	N/A
C4	N/A	C5	N/A		

2.5.7 CN7: Audio Connector

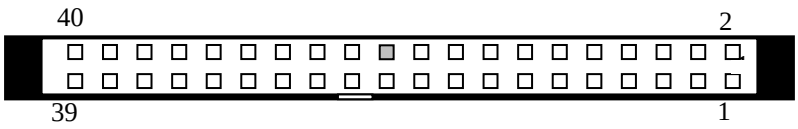
The audio connector, from top to bottom, is composed of Line in and Line out.

2.6 Connectors and Pin Assignment

The table below lists the function of each of the board's connectors.

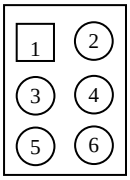
Label	Function	Note
CON3	LVDS LCD Output Connector	DF13-40DP-1.25V
CON4	Control Digital Panel Power On / Off	3x2 header, pitch 2.54mm
CON5	Digital Panel Backlight Brightness Control	7x1 header, pitch 2.0 mm
CON6	RS-422 / RS-485 Header	5x1 header, pitch 2.0 mm
CON7	VCC(+5V)	2x1 header, pitch 2.0 mm
CON8	VCC(+12V)	2x1 header, pitch 2.0 mm
COM3/COM4	RS-232 Series Port	2x10 header, pitch 2.0mm
IDE1	Primary IDE Connector	2x22 pin IDE Conn.
ATX1	ATX Power Connector	20 pin ATX Power Conn.
CPU FAN1	CPU FAN Conn.	3x1 header, pitch 2.54mm
SYS FAN1	System FAN Conn.	3x1 header, pitch 2.54mm
SYS FAN2	System FAN Conn.	3x1 header, pitch 2.54mm
USB5.6	USB Ports	5x2 header, pitch 2.0 mm
USB7.8	USB Ports	5x2 header, pitch 2.0 mm
USB9.10	USB Ports	5x2 header, pitch 2.0 mm
PANEL 1	System Function Connector	5x2 header ,pitch 2.0mm
Audio 2	Audio Function Connector	6x2 header ,pitch 2.0mm

2.6.1 CON3: LVDS LCD Output Connector



Pin No.	SYMBOL	Pin No.	SYMBOL
1	LCDVDD	21	GND
2	LVDS_TXL0N	22	LVDS_TXU0N
3	LCDVDD	23	GND
4	LVDS_TXL0P	24	LVDS_TXU0P
5	LCDVDD	25	GND
6	LVDS_TXL1N	26	LVDS_TXU1N
7	GND	27	GND
8	LVDS_TXL1P	28	LVDS_TXU1P
9	GND	29	GND
10	LVDS_TXL2N	30	LVDS_TXU2N
11	GND	31	GND
12	LVDS_TXL2P	32	LVDS_TXU2P
13	GND	33	GND
14	LVDS_TXLCKN	34	LVDS_TXUCKN
15	GND	35	GND
16	LVDS_TXLCKP	36	LVDS_TXUCKP
17	GND	37	GND
18	LVDS_TXL3N	38	LVDS_TXU3N
19	GND	39	GND
20	LVDS_TXL3P	40	LVDS_TXU3P

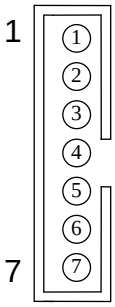
2.6.2 CON4: Control Digital Panel Power On / Off



* : default

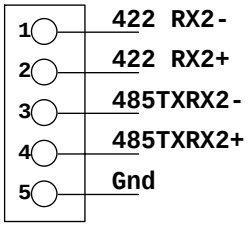
Description	Function	Pn#
Control Digital Panel Power On / Off	VCC3(3.3V)*	1 Short 2
	VCC(5V)	3 Short 4
	+12V	5 Short 6

2.6.3 CON5: Digital Panel Backlight Brightness Control



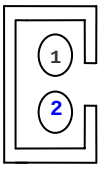
Pin No.	SYMBOL
1	+12V
2	+12V
3	+12V
4	Gnd
5	Control Pin
6	Gnd
7	BLON(TO NB)

2.6.4 CON6: RS-422 / RS-485 Header



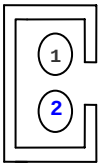
Pin No.	SYMBOL
1	422 RX2-
2	422 RX2+
3	485 TXRX2-
4	485TXRX2+
5	Gnd

2.6.5 CON7: VCC(+5V)



Pin No.	SYMBOL
1	+5V
2	Gnd

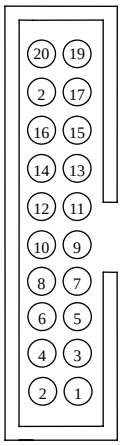
2.6.6 CON8: VCC(+12V)



Pin No.	SYMBOL
1	+12V
2	Gnd

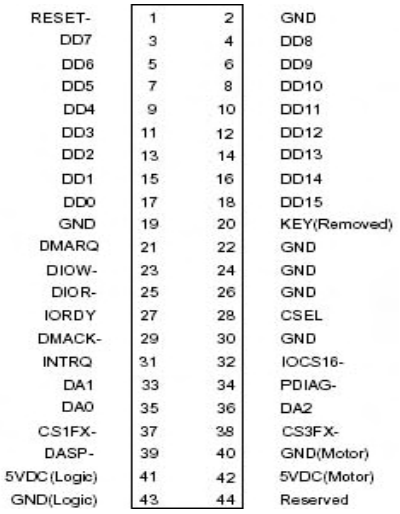
2.6.7 COM3/COM4: RS-232 Series Port

F81216D



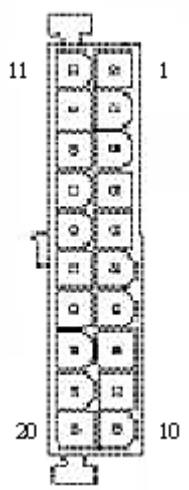
Pin No.	SYMBOL	Pin No.	SYMBOL
1	FK_NDCD1	11	FK_NDCD2
2	FK_NDSR1	12	FK_NDSR2
3	FK_NSIN1	13	FK_NSIN2
4	FK_NRTS1	14	FK_NRTS2
5	FK_NSOUT1	15	FK_NSOUT2
6	FK_NCTS1	16	FK_NCTS2
7	FK_NDTR1	17	FK_NDTR2
8	FK_NRI1	18	FK_NRI2
9	GND	19	GND
10	GND	20	GND

2.6.8 IDE1: 44Pin IDE Connector


RESET- 1 2 GND
DD7 3 4 DD8
DD6 5 6 DD9
DD5 7 8 DD10
DD4 9 10 DD11
DD3 11 12 DD12
DD2 13 14 DD13
DD1 15 16 DD14
DD0 17 18 DD15
GND 19 20 KEY(Removed)
DMARQ 21 22 GND
DIOW- 23 24 GND
DIOR- 25 26 GND
IORDY 27 28 CSEL
DMACK- 29 30 GND
INTRQ 31 32 IOCS16-
DA1 33 34 PDIAG-
DA0 35 36 DA2
CS1FX- 37 38 CS3FX-
DASP- 39 40 GND(Motor)
5VDC(Logic) 41 42 5VDC(Motor)
GND(Logic) 43 44 Reserved

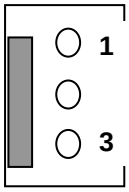
Pin No.	SYMBOL	Pin No.	SYMBOL
1	DD7	2	GND
3	DD6	4	DD8
5	DD5	6	DD9
7	DD4	8	DD10
9	DD3	10	DD11
11	DD2	12	DD12
13	DD1	14	DD13
15	DD0	16	DD14
17	DMARQ	18	DD15
19	DIOW-	20	KEY(Removed)
21	DIOR-	22	GND
23	IORDY	24	GND
25	DMACK-	26	GND
27	INTRQ	28	CSEL
29	DA1	30	GND
31	DA0	32	IOCS16-
33	CS1FX-	34	PDIAG-
35	DASP-	36	DA2
37	CS1FX-	38	CS3FX-
39	DASP-	40	GND(Motor)
41	5VDC(Logic)	42	5VDC(Motor)
43	GND(Logic)	44	Reserved

2.6.9 ATX1: ATX Power Connector



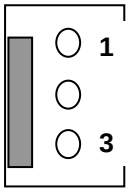
PIN	SYMBOL	PIN	SYMBOL
11	3.3V	1	3.3V
12	-12V	2	3.3V
13	Ground	3	Ground
14	PS_ON (Soft on/off)	4	VCC
15	Ground	5	Ground
16	Ground	6	VCC
17	Ground	7	Ground
18	-5V	8	Power Good
19	VCC	9	5V SB (Stand by +5V)
20	VCC	10	+12V

2.6.10 CPU FAN1: CPU FAN Connector



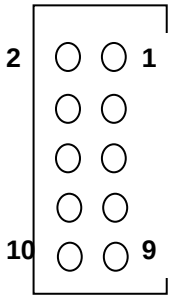
Pin No.	SYMBOL
1	GND
2	+12V
3	SENSE

2.6.11 SYS FAN1/ SYS FAN2: System FAN Connector



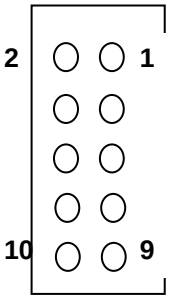
Pin No.	SYMBOL
1	GND
2	+12V
3	SENSE

2.6.12 USB5.6 / USB7.8 / USB9.10 : USB Ports Pin Header



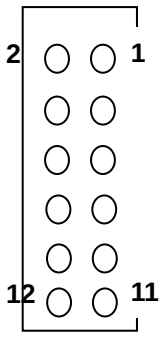
Pin	Signal Name	Pin	Signal Name
1	USBPWR1	2	USBPWR1
3	USBPxN	4	USBPxN
5	USBPxP	6	USBPxP
7	GND	8	GND
9	GND	10	N/C

2.6.13 PANEL 1: System Function Connector



Pin	Signal Name	Pin	Signal Name
1	PW ON LED+	2	HDD_LED+
3	PW ON LED-	4	HDD_LED-
5	PW ON Button+	6	Reset Button-
7	PW ON Button-	8	Reset Button+
9	N/C	10	5VSB

2.6.14 Audio 2: Audio Function Connector



Pin	Signal Name	Pin	Signal Name
2	NC	1	VCC
4	NC	3	GND
6	MIC-R	5	Line-Out R
8	GND	7	GND
10	MIC-L	9	Line-Out L
12	GND	11	GND

CHAPTER 3

Phoenix BIOS Setup

This chapter describes how to set BIOS configuration

Chapter 3 Phoenix BIOS SETUP

3.1 Starting Setup

Your computer comes with a hardware configuration program called BIOS Setup that allows you to view and set system parameters.

The BIOS (Basic Input / Output System) is a layer of software, called 'firmware', that translates instructions from software (such as the operating system) into instructions that the computer hardware can understand. The BIOS settings also identify installed devices and establish special features.

- **USE BIOS SETUP TO**
  - Set the current time and date.
  - Customize your hardware settings according to your needs,
  - Secure your computer with a password.

Note:

Values for the various setup items that appear on your own screen (including default values) may not be the same as the values shown on the screen figures in this chapter. This is because the BIOS is revised and updated from time to time. If in doubt, check Winmate website for the latest BIOS versions and related information.

- **ENTERING BIOS SETUP**

You can access the BIOS program just after you turn on your computer. Just press the F2 key when the following prompt appears:

Press <F2> to enter Setup.

When you press F2 to enter BIOS Setup, the system interrupts the Power-On Self-Test (POST). If the system detects an error during POST, it prompts you with a double beep and a message: Press <F1> to resume. If you press F1, the system enters the BIOS Setup program. If you want to fix the error, carefully read the error message that appears above the prompt (taking notes if you want) and press F2.

Note:

If you receive this message repeatedly and the date displayed by your computer is inaccurate, then your CMOS battery may have lost charge. Contact your Technical Support Centre for advice.

➢ BIOS SETUP SCREENS

After you press **F2**, the system displays the BIOS Setup interface. Use the left and right arrow keys to toggle through the BIOS Setup menu items.

➢ LOOKING AT SCREENS

BIOS setup screens have four areas:

- Menu items - the top of the screen. This area highlights which menu are active.
- Parameters - the left side of the screen. This area lists parameters and their current settings.
- Available Options and Help - the right side of the screen. This area lists alternate settings and Help text for each parameter.
- Key Legend - the bottom of the screen. These lines display the keys that move the cursor and select parameters.

Options that are grayed out are not available for the current selection. Settings displayed in blue are automatically detected by your computer.

➢ USING KEYS

The following table lists the BIOS Setup keys and their functions:

Table 1: BIOS Setup Keys and Associated Functions

Key	Function
F1	Displays a general help screen
← and →	Moves between the available menus.
↑ and ↓	Moves the cursor between the displayed parameters.
Enter	Selects a sub-menu (sub-menus are indicated with a ➢ at the beginning of the line), a menu command (such as Exit Discarding Changes), or displays the options available for the currently selected parameter.
F5/F6	Steps forward/backward through the settings available for the selected parameter.
Tab	For some parameter settings, moves the cursor between the subfields. For example, for System Time, Tab moves the cursor from hour to minute to second.
Esc	Exits any pop-up window and from any menu screen, pressing Escape jumps directly to the Exit menu.
F9	Loads the default configurations, as recorded before the computer left the factory.
F10	Saves and exits the BIOS setup utility.

3.2 Phoenix BIOS Setup

Once you enter the Phoenix BIOS™ CMOS Setup Utility, the Main Menu will appear on the screen.

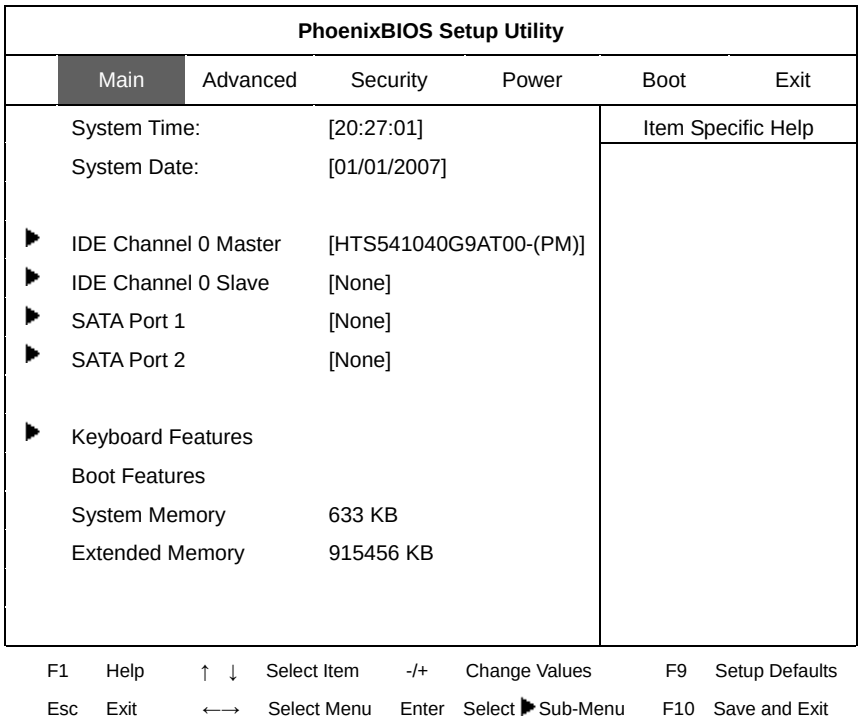
The Setup Utility features five menus which are listed on the menu bar at the top of the screen. The Main Menu allows you to select from several setup functions and two exit choices. User the arrow keys to select among the items and press <← **and** → > to accept and enter the sub-menu.

- **Main** - use this menu for basic system configuration.
- **Advanced** - use this menu to set I/0 device configuration and more.
- **Security** - use this menu to set user and administrator passwords, and other security features.
- **Power** - Use this menu to specify your setting for power management.
- **Boot** - use this menu to set the boot sequence.
- **Exit** - use this menu to exit the Setup utility with various save or discard options.

These menus are described in detail in the following pages.

3.3 Main Menu

Use the Main menu screen to view the System Time, System Date and to modify drive parameters and related settings via the HDD Sub-menu.



The Main Menu allows users to configure system components such as date, time, hard disk drive, floppy drive and display. Use the arrow keys to highlight the item and then use the <Page Up> or <Page Down> keys to select the value you want in each item.

The Main Menu screen is shown above. Follow each item:

- **System Time (hh/mm/ss)**

  Set the time. Enter the current hour, minute and second in hr/min/sec, 24-hour format.

  To set the time use the Tab or Enter keys to move from field to field. Simply type the new number required.

- **System Date (mm/dd/yyyy)**

  Set your system's calendar month, day and year. These settings remain in the memory even after you turn off system power.

  To set the date use the Tab or Enter keys to move from field to field. Simply type the new number required.

- **IDE Channel1 0 Master / Slave**

Press <Enter> to enter the sub-menu to detailed options.

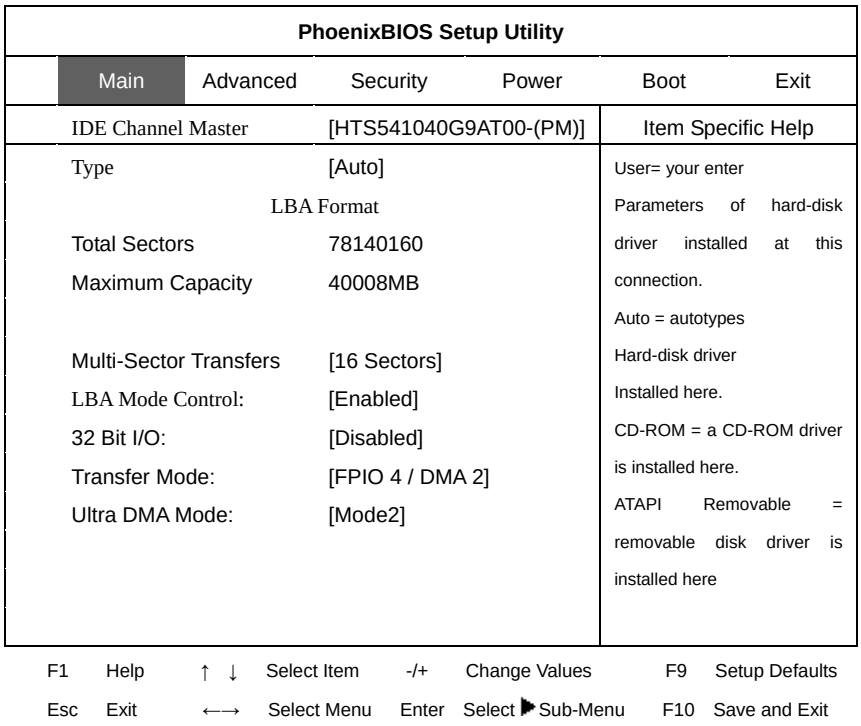
The Master and Slave sub-menus accessed from the Main Menu control these types of devices:

Hard-disk drives

Removable-disk drives such as Zip drives

CD-ROM drives

If you need to change your drive settings, selecting one of the Master or Slave drives on the Main Menu displays a sub-menu like this:



Selecting 'Manual' lets you set the remaining fields on this screen and select the type of fixed disk.

- The type choice: **Auto*, None, User, ATAPI Removable, IDE Removable and CD-ROM**
- *Default: Auto**
  - ***Auto = Autotyping, the drive itself supplies the correct drive information.***

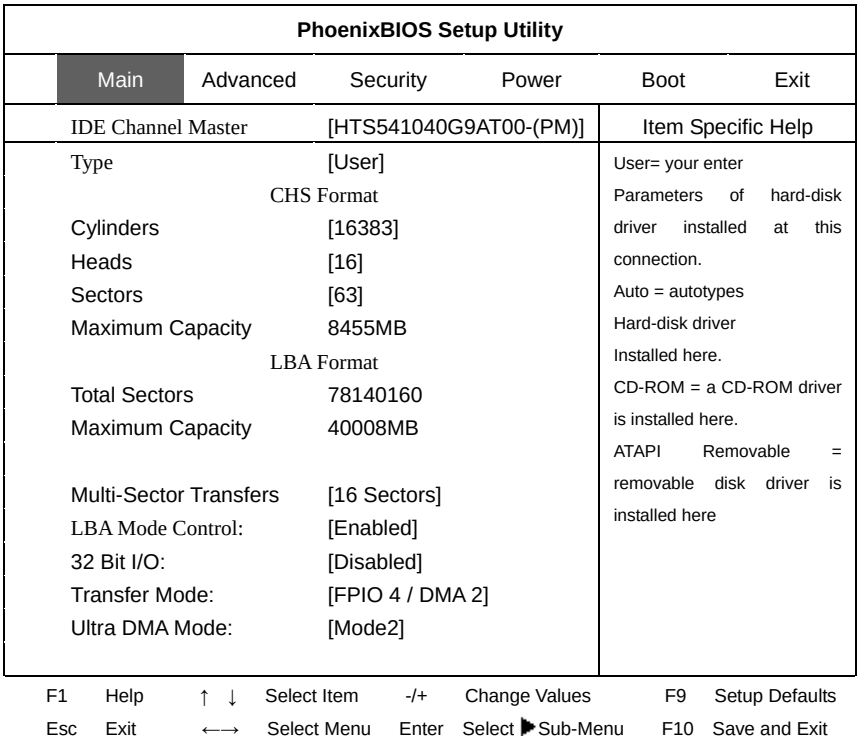
    When set to Auto, the BIOS detects what the drive is capable of, not the translation mechanism that was used to format the drive. If a drive is run in a mode other than the mode in which it was partitioned and formatted, unpredictable results may occur, including data loss.

- ***None = Autotyping is not able to supply the drive type or end user has selected None, disabling any drive that may be installed.***

  When set to None, this informs the system to ignore this drive.

- ***User = You supply the hard-disk drive information in the following fields.***

  When set to User, allows the manual entry of some of the fields described below. In most cases, we recommend you not to configure your hard disk drive manually using the CHS (Cylinders, Heads, Sectors) mode. This should be done only for hard disk drives which don't support the LBA mode, or are not automatically detected.



Feature	Options	Description
Multi-Sector Transfers	Disabled 2 Sectors 4 Sectors 8 Sectors 16 Sectors	Any selection except Disabled determines the number of sectors transferred per block.
LBA Mode Control	Enabled Disabled	Enabling LBA causes Logical Block Addressing to be used in place of Cylinders, Heads & Sectors.
32-Bit I/O	Enabled Disabled	Enables 32-bit communication between CPU and IDE card. Requires PCI or local bus.
Transfer Mode	Standard Fast PIO 1 Fast PIO 2 Fast PIO 3 Fast PIO 4 FPIO3 / DMA1 FPIO4 / DMA2	Selects the method for transferring the data between the hard disk and system memory. The Setup menu only lists those options supported by the drive and platform.
Ultra DMA Mode	Disabled Mode 0 Mode 1 Mode 2 Mode 3 Mode 4 Mode 5 Mode 6	Selects the Ultra DMA mode used for moving data to/from the drive.

- ***IDE Removable = Removable read-and-write media (e.g., IDE Zip drive).***

  When set to IDE Removable, allows the manual entry of some fields.

- ***CD-ROM = Readable CD-ROM drive.***

  When set to CD-ROM, allows the manual entry of some fields.

- ***ATAPI Removable = Read-and-write media (e.g., LS120, USB Floppy, USB Zip).***

  When set to ATAPI Removable, allows the manual entry of some fields.

WARNING:

Incorrect settings can cause your system to malfunction. To correct mistakes, return to Setup and restore the Setup Defaults with <F9> and re-enter the correct drive parameters.

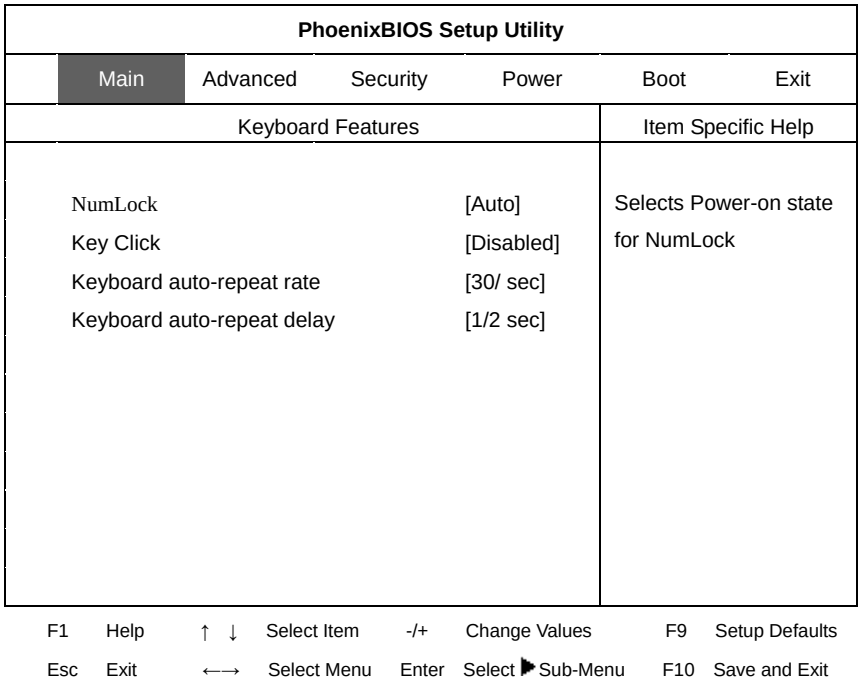
➢ SATA Part 1 / 2

Press <Enter> to enter the sub-menu to detailed options.

- The choice: **None, User, Auto*, ATAPI Removable, IDE Removable and CD-ROM**
- *Default: Auto**

➢ Keyboard Features

Selecting "NumLock" on the Main Menu displays the Keyboard Features menu:



Use the following chart to configure the keyboard features:

* Default

Feature	Options	Description
NumLock	Auto* On Off	On or Off turns NumLock on or off at boot up. Auto turns NumLock on if it finds a numeric key pad.
Key Click	Enabled Disabled*	Turns audible key click on.
Keyboard auto-repeat rate	2/sec 6/sec 10/sec 13.3/sec 21.8/sec 26.7/sec 30/sec*	Sets the number of times a second to repeat a keystroke when you hold the key down.
Keyboard auto-lag delay ¼ sec	¼ sec ½ sec ¾ sec 1 sec	Sets the delay time after the key is held down before it begins

➢ Boot Features

- Summary screen: Display system configuration on boot.
- Boot-time Diagnostic Screen: Display the diagnostic screen during boot.

- QuickBoot Mode: Allows the system to skip certain tests while booting. This will decrease the time needed to boot the time needed to boot the system.

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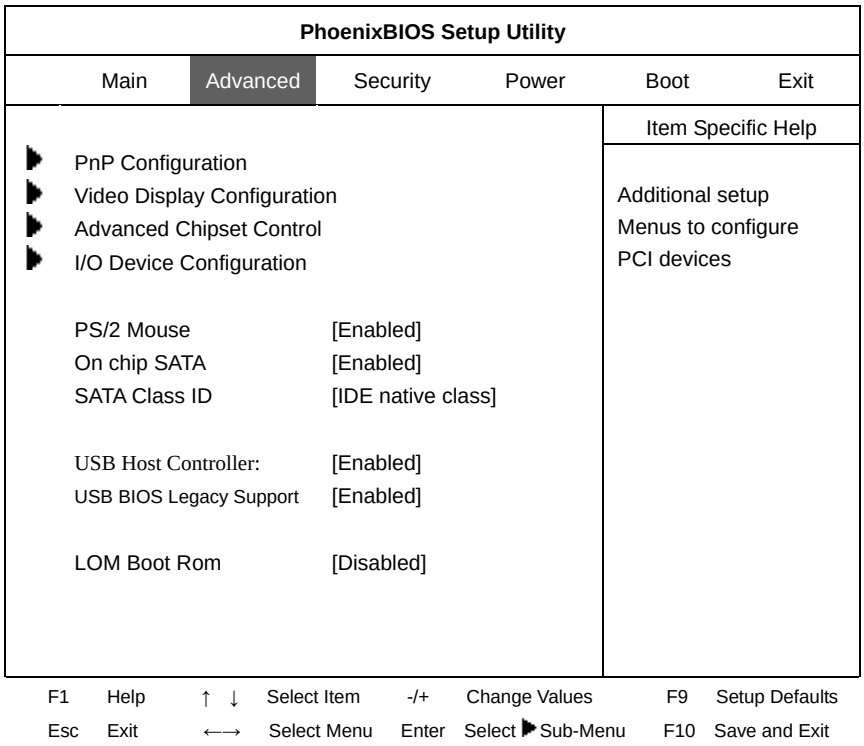
3.4 Advanced Menu

Selecting "Advanced" from menu bar on the Main Menu displays a menu like this:



This section allows you to configure your system for basic operation.

- **PnP Configuration**

  You can additional setup menus to configure the PCI devices.

  - PCI/PNP ISA UMB Region Exclusion

    Reserve specific upper memory blocks for use by legacy ISA devices.
  - PCI/PNP ISA IRQ Resource Exclusion

    Reserve specific IRQs for use by legacy ISA devices.

- **Video Display Configuration**

  Select options for video display.

  - The choice: **Auto*, CRT Only, LCD Only, CRT/DVI Force, Others Auto.**
  - Default*: Auto**

- **Advanced Chipset Control**

  Select options for Advanced Chipset.

  - Advanced NB Options:

- *PCIE* Options:
  Direct TMDS Support the choice: **Enabled* or Disabled.**
- Primary Display:
  Use PCI Gfx or IGP Gfx for the boot display device.
- UMA Frame Buffer Size:
  - ✓ The choice: **AUTO*, 32MB, 64MB, 96MB, 128MB, 160MB, 192MB, 224MB, 256MB.**
  - ✓ Default*: Auto**

■ Advanced SB Options:

- Audio Onboard Choice:
  - ✓ The choice: **Enabled*, Disabled**
  - ✓ Default*: Enabled* *

➢ **I/O Device Configuration**

Many systems allow you to control the configuration settings for the I/O ports. Select "I/O Device Configuration" on the Advanced Menu to display this menu and specify how you want to configure these I/O Devices:

PhoenixBIOS Setup Utility					
Main	Advanced	Security	Power	Boot	Exit

I/O Device Configuration		Item Specific Help
Serial port A:	[Enabled]	Configure serial port A using options: [Disabled] No configuration [Enabled] User configuration [Auto] BIOS or OS chooses configuration (OS controlled) Display when Controlled by OS
Base I/O address/IRQ	[3F8/IRQ 4]	
Serial port B:	[Enabled]	
Base I/O address/IRQ	[2F8/IRQ 3]	
Serial port C:	[Enabled]	
Base I/O address/IRQ	[3F8/IRQ 5]	
Serial port D:	[Enabled]	
Base I/O address/IRQ	[2F8/IRQ 11]	

F1	Help	↑ ↓	Select Item	-/+	Change Values	F9	Setup Defaults
Esc	Exit	←→	Select Menu	Enter	Select ▶ Sub-Menu	F10	Save and Exit

Use the following chart to configure the Input/Output settings:

* Default

Feature	Options	Description
Serial port A: Serial port B: Serial port C: Serial port D:	Enabled* Disabled Auto	Disabled turns off the port. Enabled requires you to enter the base Input/Output address and the Interrupt number on the next line. Auto makes the BIOS configure the port automatically during POST.
Base I/O Address/IRQ	3F8, IRQ 4 2F8, IRQ 3 3E8, IRQ 5 2E8, IRQ 11	If you select Enabled, choose one of these combinations.

- **PS/2 Mouse**

  Disabled disables any installed PS/2 mouse, but frees up IRQ 12 for use by another device. Auto lets the BIOS control the mouse.

  - The *choice*: **Enabled*, Disabled, Auto**
  - *Default: Enabled**

- **On Chip SATA**
  - The choice: **Enabled*, Disabled**
  - *Default: Enabled**

- **SATA Class ID**
  - The choice: **IDE native class*, IDE Legacy class**
  - *Default: IDE native class **

- **USB Host Controller**
  - The choice: **Enabled*, Disabled**
  - *Default: Enabled**

- **USB BIOS Legacy Support**
  - The choice: **Enabled*, Disabled**
  - *Default: Enabled**

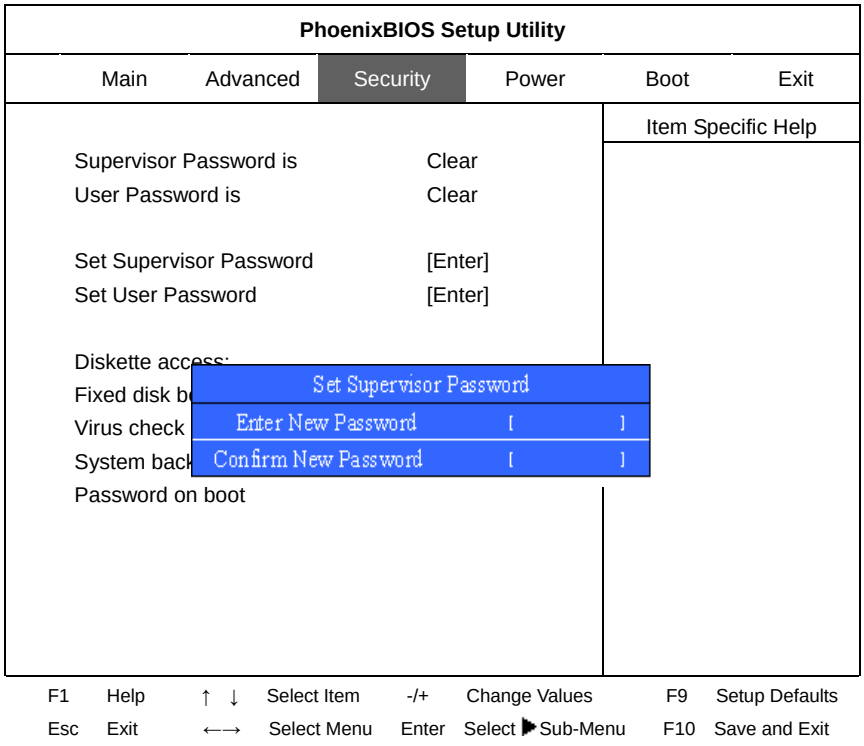
- **LOM Boot Rom**
  - The choice: **Enabled, Disabled***
  - *Default: Disabled**

WARNING:

Incorrect settings can cause your system to malfunction. To correct mistakes, return to Setup and restore the Setup Defaults with <F9> and re-enter the correct drive parameters

3.5 Security Menu

Use the Security Menu to establish system passwords.



Your computer supports a password for system security on several levels. Keep in mind that you must set the supervisor password before the BIOS Setup utility allows you to set a user password.

Once you set a supervisor password, you must type it before you can enter BIOS Setup, and then depending on the selections made in the Security menu, access the system at start-up or Hibernation (Save To File).

Note:

1. When entering BIOS Setup using the user password, only a limited number of fields can be changed; the most sensitive items are read-only
2. In some systems, the User and Supervisor passwords are related; you cannot have a User password without first creating a Supervisor password. In other systems, you can create and use them independently.

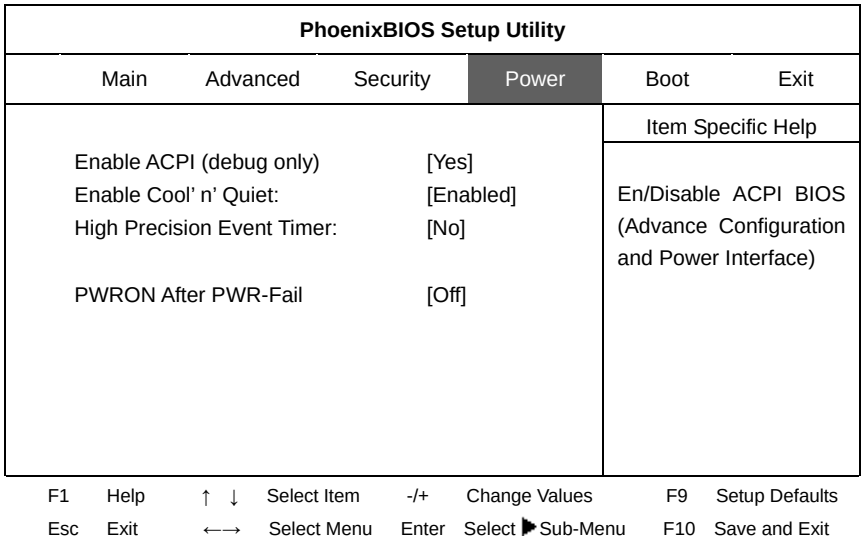
Use the following chart to configure the system-security and anti-virus options.

* Default

Feature	Options	Description
Set Supervisor Password	Up to seven alphanumeric characters	Pressing <Enter> displays dialog box for entering the supervisor password. In related systems, this password gives full access to Setup menus.
Set User Password	Up to seven alphanumeric characters	Pressing <Enter> displays the dialog box for entering the user password. In related systems, this password gives restricted access to SETUP menus.
Fixed disk boot sector	Normal* Write Protect	Write protects the boot sector on the hard disk for virus protection. Requires a password to format or Fdisk the hard disk
Virus check reminder	Disabled* Daily Weekly Monthly	Displays a message during boot up asking (Y/N) if you have backed up the system or scanned it for viruses. Message returns on each boot until you respond with "Y". Daily displays the message on the first boot of the day, Weekly on the first boot after Sunday, and Monthly on the first boot of the month.
System backup reminder	Disabled* Daily Weekly Monthly	Displays a message during boot up asking (Y/N) if you have backed up the system or scanned it for viruses. Message returns on each boot until you respond with "Y". Daily displays the message on the first boot of the day, Weekly on the first boot after Sunday, and Monthly on the first boot of the month.

3.6 Power Menu

Use this menu to specify your settings for Power Management. Remember that the options available depend upon the hardware installed in your system. Those shown here are from a typical system.


PhoenixBIOS Setup Utility
Main
Advanced
Security
Power
Boot
Exit
Item Specific Help
Enable ACPI (debug only) [Yes]
Enable Cool' n' Quiet: [Enabled]
High Precision Event Timer: [No]
PWRON After PWR-Fail [Off]
En/Disable ACPI BIOS (Advance Configuration and Power Interface)
F1 Help ↑ ↓ Select Item -/+ Change Values F9 Setup Defaults
Esc Exit ←→ Select Menu Enter Select ▶ Sub-Menu F10 Save and Exit

- **Enable Cool n' Quiet**

  If you want to enable Cool n' Quiet function, please refer the chapter 7.

- **PWRON After PWR-Fail**

  Select the item "On", the system can be reboot automatically when power fail. Select "Former-Sts" will follow former setting. Select "Off", you need to reboot the system manually.

  - The choice: **Off*, On, Former-Sts**
  - *Default: Off**

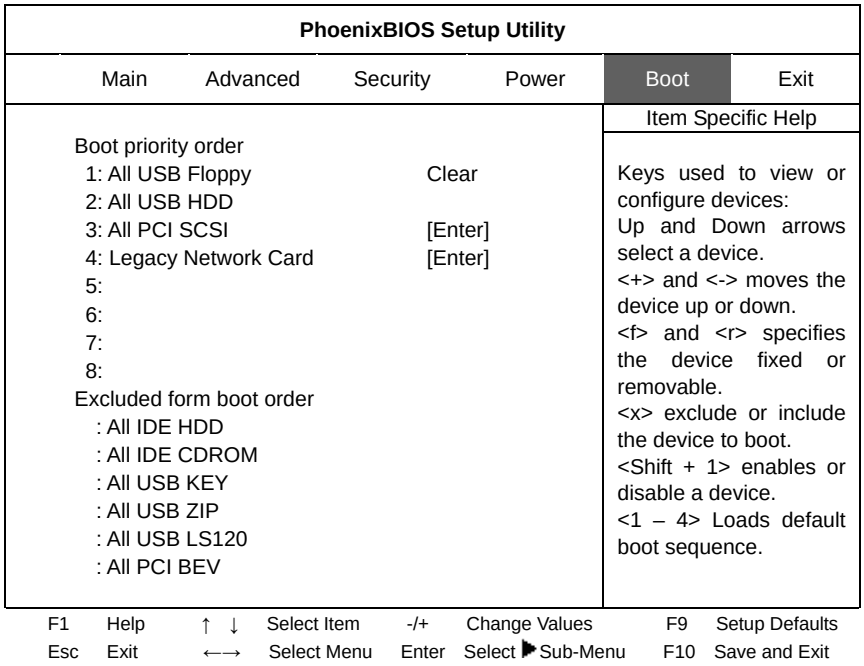
Use the following chart in making your selections:

* Default

Feature	Options	Description
Enable Cool n' Quiet	Enabled* Disabled	Enable / Disable Cool n' Quiet for CPU Power management.
High Precision Event Timer	Yes* No	Enable / Disable High Precision Event Timer
PWRON After PWR-Fail	Off* On Former-Sta	System can be reboot automatically / follow former setting / Off when power fail

3.7 Boot Menu

Use this menu to modify the boot options, and to specify the order of the bootable devices.



The entries from this field represent devices that can be used to start your computer. When your computer starts it will search each device, following the order defined in the list, for any 'boot' (start-up) instructions available. If a disk is found that contains such information, it will be used to start your computer.

This can be useful if the disk contains a 'rescue' program, that will solve a serious problem with your computer (your Recovery Disk or Recovery CD does this). Consequently, you should keep removable devices above your main hard drive in this list. Should your computer's hard drive develop a major fault, you will also be able to use a bootable CD or floppy disk to start your computer.

- **Move the devices up or down the list by using the <+> or <-> keys on the keyboard.**

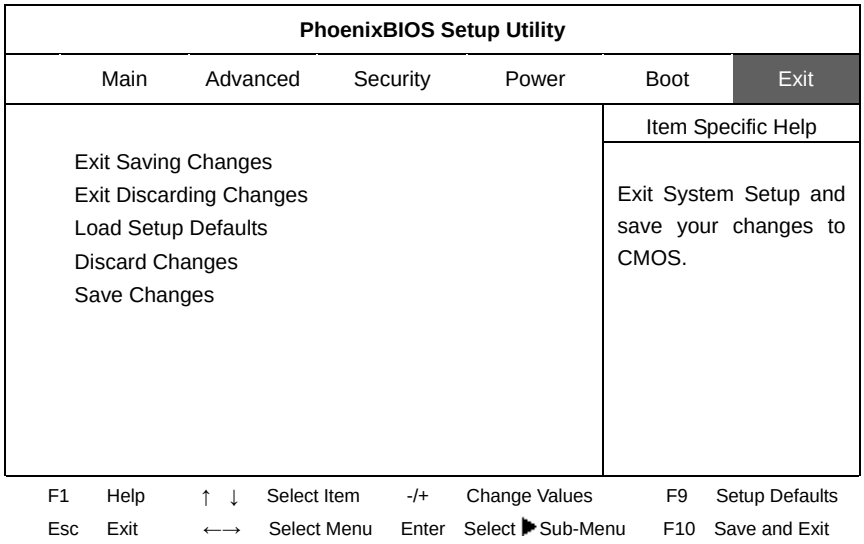
- **Fixed or removable the device by using the <f> or <r> key on the keyboard.**

- **Should you have more than one of the type of device specified, you can expand the entry to see a list of peripherals by pressing the <x> key.**

- **Boot priority order**
  - The choice: All USB Floppy, All USB HDD, All PCI SCSI, Legacy Network Card, All IDE HDD, All IDE CDROM, All USB KEY, All USB CDROM, ALL USB ZIP, All USB LS120, All PCI BEV.

3.8 Exit Menu

Use this menu to implement or discard the changes you made to the BIOS Setup, and/or to exit the utility. Select any parameter and press Enter to perform the corresponding action.



- **Exit Saving Changes**
  - Save configuration changes and exit now? (Yes / No)
  - Pressing 'Y', and the BIOS accepts changes made to current settings, and exits BIOS Setup.

- **Exit Discarding Changes**
  - Configuration has not been saved! Save before exiting? (Yes / No)
  - Pressing 'Y', and the BIOS exits Setup without applying any changes that have been made during this session.

- **Load Setup Defaults**

  Loads default configuration settings that were defined before the computer left the factory.

  To display the default values for all the Setup menus, select "Load Setup Defaults" from the Main Menu. The program displays this message:

  ROM Default values have been loaded!

  Press <space> to continue

  If, during boot up, the BIOS program detects a problem in the integrity of values stored in CMOS, it displays these messages:

  System CMOS checksum bad - run SETUP

  Press <F1> to resume, <F2> to Setup

  The CMOS values have been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS.

Setup Confirmation	
Load default configuration now?	
[Yes]	[No]

- **Discard Changes**

  Use this option to exit Setup without storing in CMOS any new selections you may have made. The selections previously in effect remain in effect.

Setup Confirmation	
Load previous configuration now?	
[Yes]	[No]

- **Save Changes**

  Selecting “Save Changes” saves all the selections without exiting Setup. You can return to the other menus if you want to review and change your selections.

Setup Confirmation	
Save configuration changes now?	
[Yes]	[No]

CHAPTER 4

Chipset Driver Installation

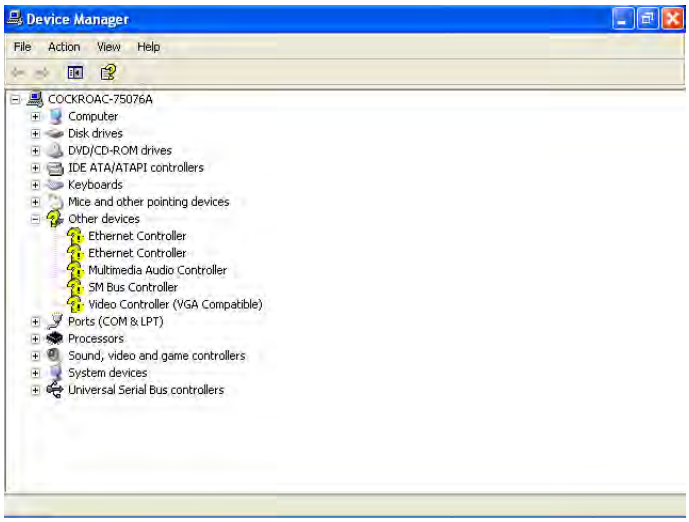
This chapter offers information on the chipset software installation utility.
Sections include:

- Installation of Chipset Utility
- Further Information

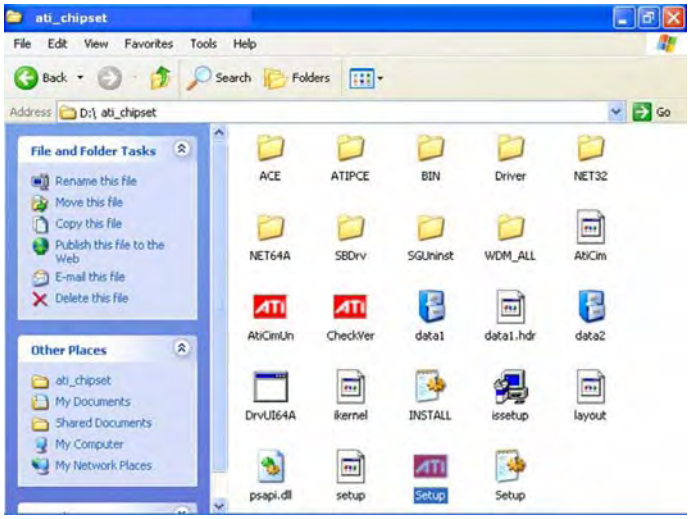
Chapter 4 Chipset Driver Installation

4.1 Standard CMOS Features

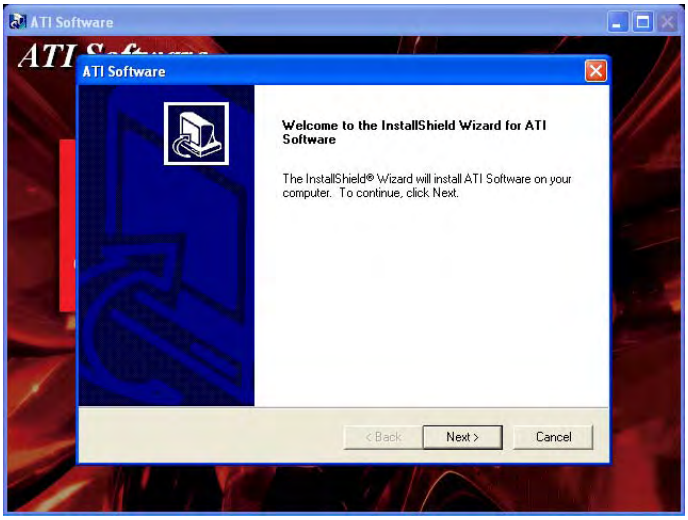
The Motherboard is equipped with AMD M690G / SB600 Companion Device. The ATi Chipset Drivers should be installed first, and it will enable “SM Bus Controller” and “Video Controller (VGA Compatible)”. Follow the instructions below to complete the installation. You will quickly complete the installation.



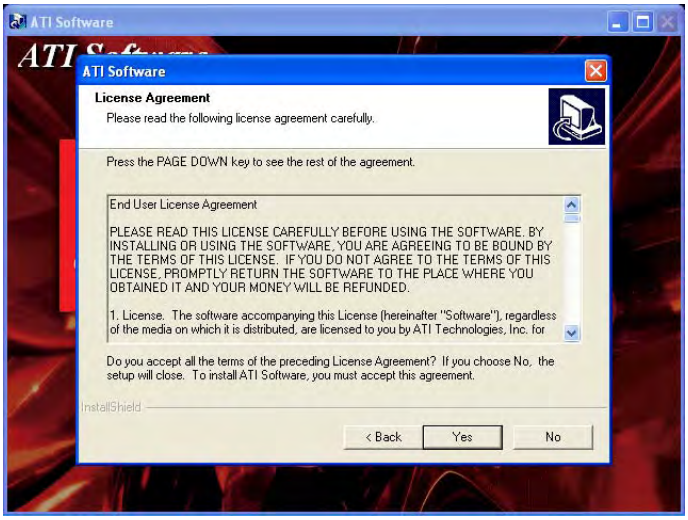
Setp.1. Insert the CD that comes with the motherboard. Open the file document “ati_chipset_8.37” and click on “Setup.exe” to execute the setup.



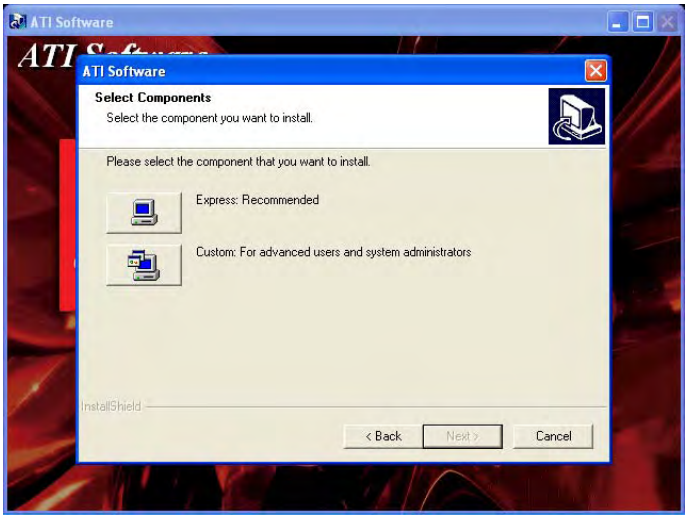
Setp.2. Click on “Next“ to install driver.


ATI Software
ATI Software
Welcome to the InstallShield Wizard for ATI Software
The InstallShield® Wizard will install ATI Software on your computer. To continue, click Next.
< Back
Next >
Cancel

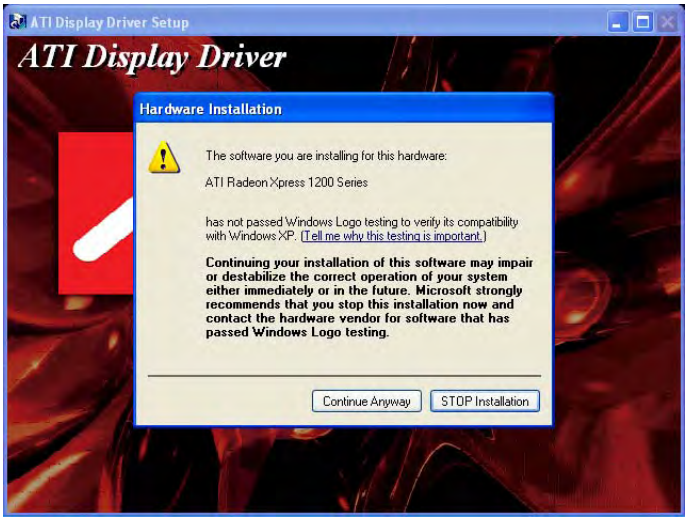
Setp.3. Click on “Yes“ to agree License.


ATI Software
ATI Software
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
End User License Agreement
PLEASE READ THIS LICENSE CAREFULLY BEFORE USING THE SOFTWARE. BY INSTALLING OR USING THE SOFTWARE, YOU ARE AGREEING TO BE BOUND BY THE TERMS OF THIS LICENSE. IF YOU DO NOT AGREE TO THE TERMS OF THIS LICENSE, PROMPTLY RETURN THE SOFTWARE TO THE PLACE WHERE YOU OBTAINED IT AND YOUR MONEY WILL BE REFUNDED.
1. License. The software accompanying this License (hereinafter "Software"), regardless of the media on which it is distributed, are licensed to you by ATI Technologies, Inc. for
Do you accept all the terms of the preceding License Agreement? If you choose No, the setup will close. To install ATI Software, you must accept this agreement.
InstallShield
< Back
Yes
No

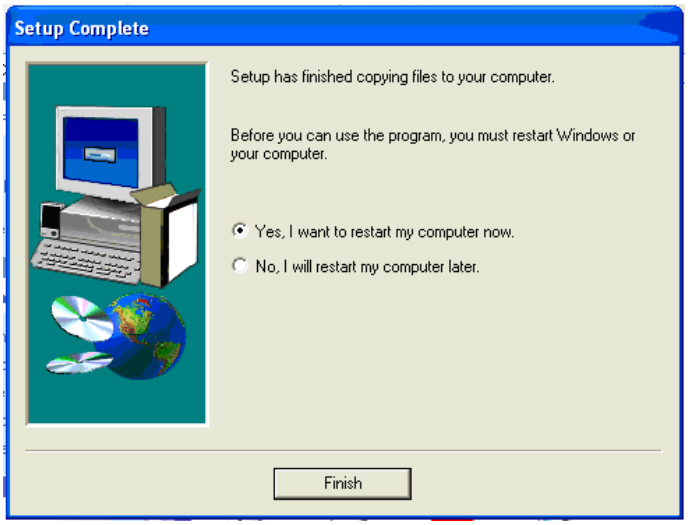
Step.4. Click on “Express: Recommended” to install Driver.



Step.5. Click on “Continue Anyway” to go on.


ATI Display Driver Setup
ATI Display Driver
Hardware Installation
The software you are installing for this hardware:
ATI Radeon Xpress 1200 Series
has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the hardware vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

Step.5. Click on “Yes, I want to restart my computer now” to go on.


Setup Complete
Setup has finished copying files to your computer.
Before you can use the program, you must restart Windows or your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Finish

CHAPTER 5

Ethernet Driver Installation

This chapter offers information on the Ethernet software installation utility.

Sections include:

- Introduction
- Installation of Ethernet Driver

Chapter 5 Ethernet Driver Installation

5.1 Introduction

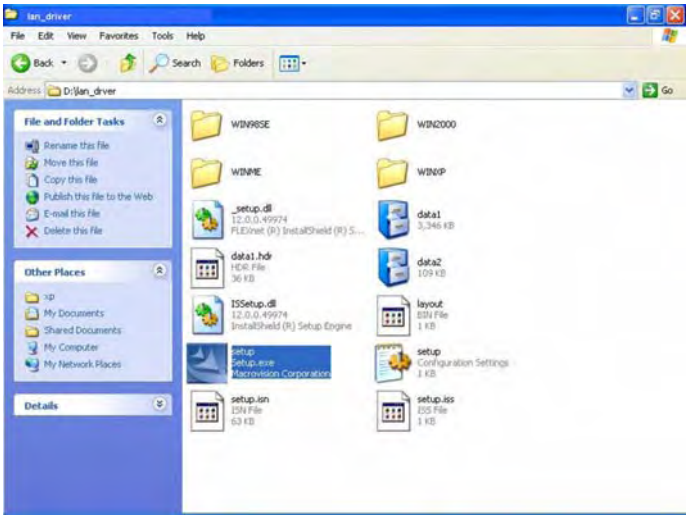
A270 Motherboard is equipped with the Realtek RTL8111B Gigabit Ethernet controller combines a triple-speed IEEE 802.3 compliant Media Access Controller (MAC) with a triple-speed Ethernet transceiver, PCI Express bus controller, and embedded memory. With state-of-the-art DSP technology and mixed-mode signal technology, it offers high-speed transmission over CAT 5 UTP cable or CAT 3 UTP (10Mbps only) cable. Functions such as Crossover Detection & Auto-Correction, polarity correction, adaptive equalization, cross-talk cancellation, echo cancellation, timing recovery, and error correction are implemented to provide robust transmission and reception capability at high speeds.

The device supports the PCI Express 1.0a bus interface for host communications with power management and is compliant with the IEEE 802.3u specification for 10/100Mbps Ethernet and the IEEE 802.3ab specification for 1000Mbps Ethernet. It also supports an auxiliary power auto-detect function, and will auto-configure related bits of the PCI power management registers in PCI configuration space.

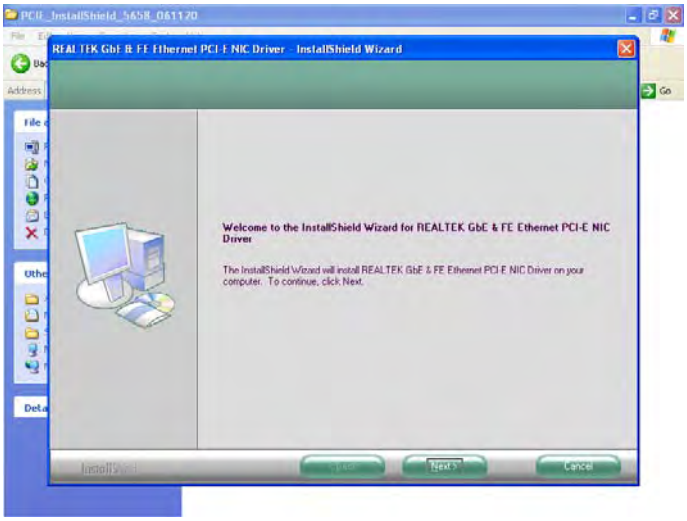
5.2 Installation of Ethernet Driver

The Users must make sure which operating system you are using in A270 Motherboard before installing the Ethernet drivers. Follow the steps below to complete the installation of the Realtek RTL8111 LAN drivers. You will quickly complete the installation.

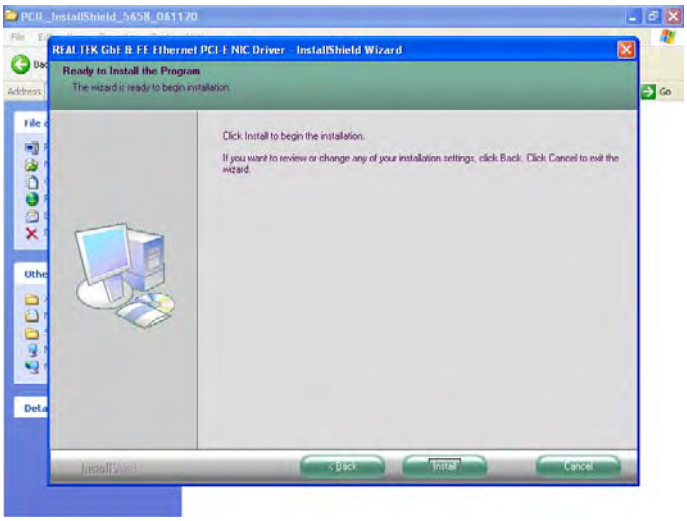
Setp.1. Insert the CD that comes with the motherboard. Open the file document "Lan_PCIE_Realtek" and click on "Setup.exe" to execute the setup.



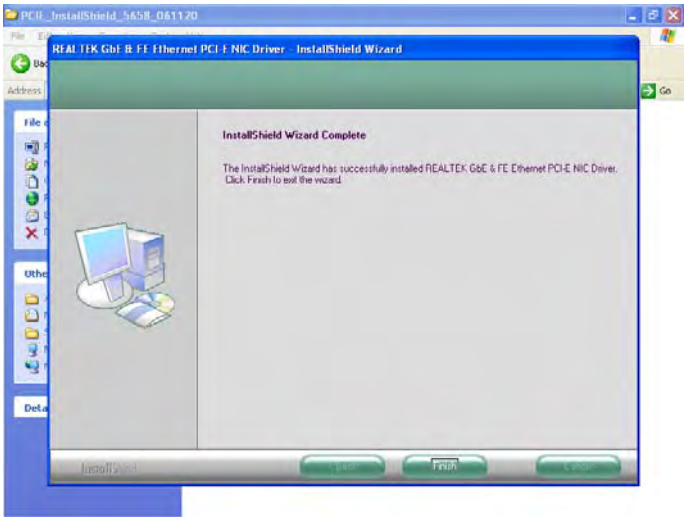
Setp.2. Click on "Next" to install driver.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
Welcome to the InstallShield Wizard for REALTEK GbE & FE Ethernet PCI-E NIC Driver
The InstallShield Wizard will install REALTEK GbE & FE Ethernet PCI-E NIC Driver on your computer. To continue, click Next.
Next
Cancel

Setp.3. Click on “install“ to go on.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
Ready to Install the Program
The wizard is ready to begin installation.
Click Install to begin the installation.
If you want to review or change any of your installation settings, click Back. Click Cancel to exit the wizard.
< Back
Install
Cancel

Setp.4. Click on “Finish“ to complete installation.


REALTEK GbE & FE Ethernet PCI-E NIC Driver - InstallShield Wizard
InstallShield Wizard Complete
The InstallShield Wizard has successfully installed REALTEK GbE & FE Ethernet PCI-E NIC Driver. Click Finish to exit the wizard.
Finish

CHAPTER 6

Audio Driver Installation

This chapter offers information on the Audio software installation utility.
Sections include:

- Introduction
- Installation of Audio Driver

Chapter 6 Audio Driver Installation

6.1 Introduction

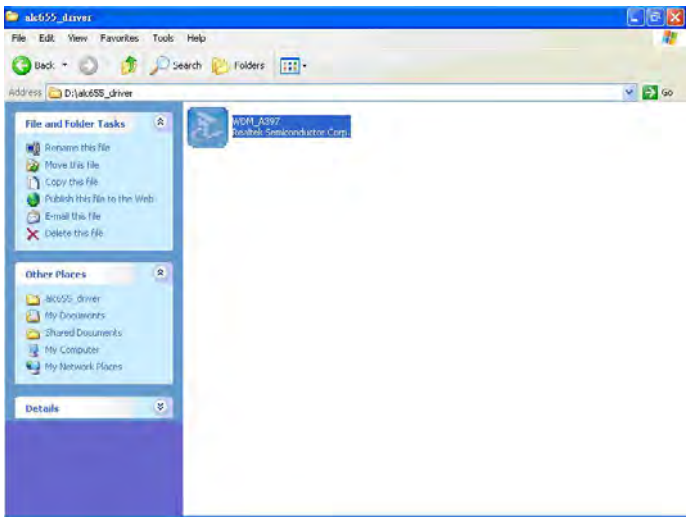
A270 Motherboard is equipped with the ALC655 is a 16-bit, full-duplex AC'97 Rev. 2.3 compatible six-channel audio CODEC designed for PC multimedia systems, including host/soft audio and AMR/CNR-based designs..

The ALC655 CODEC provides three pairs of stereo outputs with 5-bit volume control, a mono output, and multiple stereo and mono inputs, along with flexible mixing, gain, and mute functions to provide a complete integrated audio solution for PCs.

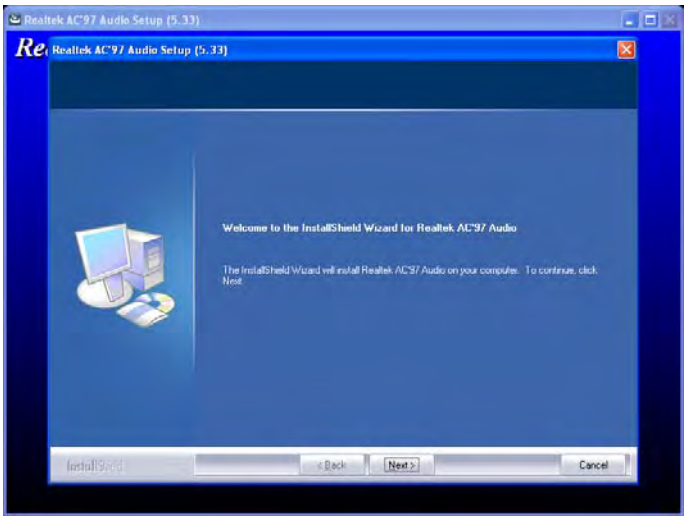
6.2 Installation of Audio Driver

The users must make sure which operating system you are using in A270 Motherboard before installing the Audio drivers. Follow the steps below to complete the installation of the Realtek ALC655 Audio drivers. You will quickly complete the installation.

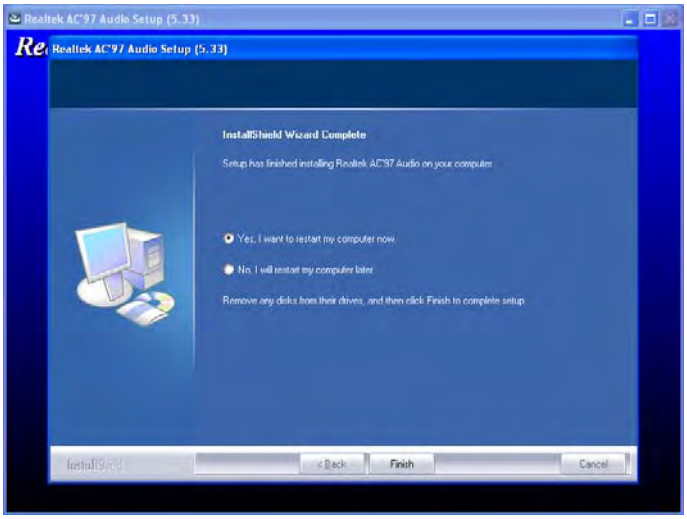
Step.1. Insert the CD that comes with the motherboard. Open the file document "Audio_alc_655" and click on "Setup.exe" to execute the setup.



Step.2. Click on “Next“ to install driver.


Realtek AC'97 Audio Setup (5.33)
Realtek AC'97 Audio Setup (5.33)
Welcome to the InstallShield Wizard for Realtek AC'97 Audio
The InstallShield Wizard will install Realtek AC'97 Audio on your computer. To continue, click Next.
InstallShield
< Back
Next >
Cancel

Step.2. Click on “Yes, I want to restart my computer now” to finish installation.


Realtek AC'97 Audio Setup (5.33)
Realtek AC'97 Audio Setup (5.33)
InstallShield Wizard Complete
Setup has finished installing Realtek AC'97 Audio on your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
InstallShield
< Back
Finish
Cancel

CHAPTER 7

Cool n’ Quiet Driver Installation

This chapter offers information on the AMD Cool n’ Quiet software installation utility.
Sections include:

- Introduction
- Installation of AMD Cool n’ Quiet Driver

Chapter 7 AMD Cool n' Quiet Driver Installation

7.1 Introduction

AMD Cool n' Quiet™ technology is an innovative solution available on AMD Athlon™TM 64 processor-based systems that can effectively lower the power consumption and enable a quieter-running system while delivering performance on demand, for the ultimate computing experience.

Some applications require less processing power than others. Word processing, for example, consumes relatively few processor cycles, but if you run games, video editing or other multimedia applications on the same system, more processor cycles will be required for responsive performance. AMD Cool 'n' Quiet™ technology controls your system's level of processor performance automatically, dynamically adjusting the operating frequency and voltage up to 30 times per second, according to the task at hand. When an application does not require full performance, significant amounts of power can be saved.

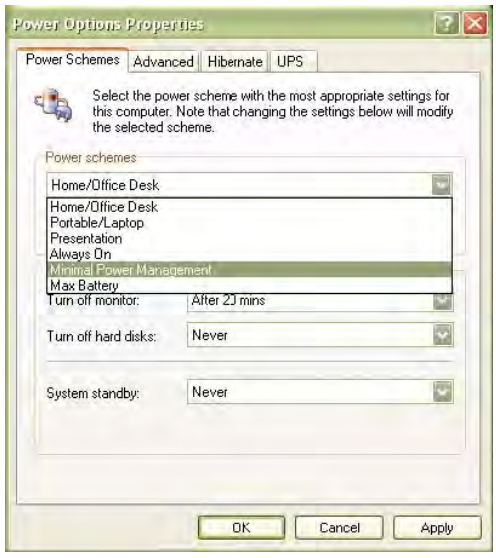
7.2 Installation of AMD Cool n' Quiet Driver

The users must make sure which using AMD Cool n' Quiet function before enable the AMD Cool n' Quiet in BIOS setting.(Please see the page.38)

Follow the steps below to complete the installation of the "AMD Cool n' Quiet" drivers. You will quickly complete the installation.

Step.1. Insert the CD that comes with the motherboard. Open the file document "Test_cool'n'quiet" and click on "amdcpu.exe" to execute the setup.

Step.2.To enable the Cool 'n' Quiet feature on a Windows XP system, you have to change the power scheme. Open the 'Power Options' from the Control Panel. Choose the power scheme 'Minimal Power Management' and click 'OK' to enable Cool 'n' Quiet.



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